

April 15, 2004

To: Commissioner for Patents P.O. Box 1450

Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572

28 Davis Avenue

Poughkeepsie, N.Y. 12603

Subject:

Serial No. $10/810,965 \quad 03/26/04$

Yen-Ming Chen et al.

NOVEL METHOD TO IMPROVE BUMP RELIABILITY FOR FLIP CHIP DEVICE

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation In An Application.

The following Patents and/or Publications are submitted to comply with the duty of disclosure under CFR 1.97-1.99 and 37 CFR 1.56.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on April 26, 2004.

Stephen B. Ackerman, Reg.# 37761

Signature/Date St. S. Chu 4/26/04

TSMC-01-413C

- U.S. Patent 5,543,253 to Park et al., "Photomask for T-Gate Formation and Process for Fabricating the Same," discusses a dual damascene like Photo process for a T-gate.
- U.S. Patent 6,042,996 to Lin et al., "Method of Fabricating a Dual Damascene Structure," discusses a dual damascene process.

The following four U.S. Patents disclose Bump and UBM processes:

- 1) U.S. Patent 6,232,212 to Degani et al., "Flip Chip Bump Bonding."
- 2) U.S. Patent 6,153,503 to Lin et al., "Continuous Process for Producing Solder Bumps on Electrodes of Semiconductor Chips."
- 3) U.S. Patent 6,130,141 to Degani et al., "Flip Chip Metallization."
- 4) U.S. Patent 6,118,180 to Loo et al., "Semiconductor Die Metal Layout for Flip Chip Packaging."

Sincerely,

Stephen B. Ackerman,

Reg. No. 37761

Form PTO-1	9					_		Doctor Humber (Cr	second .	44	Heaton Humen	- d				
INFOF	١М١	ΔΤ	10	N	פוח	SC	:1 (OSURE 9		TSMC-01-413C 10/810,965						
01	11117	11	l A	ίŇ	A۱	эp		CATION	<i>1</i>	Myen-Ming Chen et al.						
									APR 29	2004	HOO DOWN			מש את שאי		
,								377 \ 2			NT DOCU		04			
EXAMINED	00	CU	LIF!	WT)	JK NJ	n r	n	DATE	TRAUT	WAR	HANG DOCOL	WCIN-13			01110	
MUNT	-	DOCUMENT HOMBER					_	0.11.		.			CLAIR	Mecris	አ ነንተሀ	אטאזנ סאטאזנ סאטאזנ
	5	5	4	3	2	5	3	8/6/96	Parl	ر و	tal.		439	5	12/1	694
	6	0	4	2	9	9	6	3/28/00	1 .	نے ۱	tal.	_	430	313	4/1	3/98
	6	۵	3	2	2	l	2	5/15/0	Dea	A 10	iet	. [438	612	2/2	3/99
	6	i	l l	l			1	11/28/01	· -	,	+ 1				-1.	198
		\Box	Į į	1	1 1		ll	, ,		<u>. e</u>	<u>, T</u>	 I	438	613	3/13	
	6	j						10/10/00	ب ا	an	leta	<u> </u>	438	455	10/1	4198
	ط	7	L	8	1	8	٥	9/12/00	اما) e	Tal.		257	737	11 (3	1197
		_	_	_	-	_	_								-	
		-	_						ļ							
		_	L	_							· • · · · · · · · · · · · · · · · · · ·					<u> </u>
									}							
										i,						
FOREIGN PATENT DOCUMENTS																
	<u></u>	OCCUPENT HUMBER ONTE						CUTE	COUNTRY			cuss	SUBCLASS	Trinit		
	\neg	_[1	+		-,-,-,,,-			·			YES	100
		-	-	-		ij	-									<u> </u>
<u></u>		-	-	-		-	-									
	_	_	_		_	_	_ -									
		_		_[_	_									
						_{										
	— т								OTHER	DOC	UMENTS	(Induding Aut	ror, Tivo, Da	ito, Portinors	Pagos. Ele	:.j [*]
																
													- 			
						_										•
		 								· · · · · ·		······································				
		_											 			
											,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
EXAMPLE								•			DATE CONKOE	NEO			•	
			_								·					
										· · · · ·						